

CLAIMS

1. Device for storing and simultaneously refilling with different colour inks a cartridge (8) of a colour printhead, comprising a container (2), in which are disposed a housing (14) for said cartridge to be refilled (8) and at least three independent tanks (20, 21, 22) for inks of different colours, each tank being associated with a feeding member (34, 35, 36), cooperating with said cartridge (8) for transferring the ink (24) of each colour from the corresponding tank (20, 21, 22) to said cartridge (8), when said container (2) is, in the operating position, vertical with respect to a horizontal support plane (10), **characterized in that** said tanks (20, 21, 22) are arranged concentrically in a central position in said container (2), and **that** each of said tanks (20, 21, 22) is suitable for containing a predetermined quantity of colour ink, collected in a corresponding feeding compartment (26, 27, 28), adjacent to a bottom wall (4) of said container (2), and **in that** each of said tanks (20, 21, 22) extends in the direction of a top wall (5) of said container (2), forming a corresponding back-flow compartment (30, 31, 32), communicating freely with the corresponding feeding compartment below (26, 27 and 28), said back-flow compartments (30, 31, 32) being suitable for receiving said colour inks, when said container (2) is turned over on a side, or upside down, so that said feeding members (34, 35, 36) emerge from said inks (24), interrupting the feeding of said cartridge (8).
2. Device as in claim 1, **characterized in that** said tanks (20, 21, 22) have a substantially cylindrical shape, wherein an outer tank (20) and an intermediate tank (21) of said three tanks (20, 21, 22) are arranged ring-like around a central tank (22).
3. Device as in claim 1, or 2, **characterized in that** said back-flow compartments (30, 31, 32) have a substantially cylindrical and concentrical shape, and are arranged around said housing (14) of said cartridge (8).

4. Device as in any one of the previous claims, **characterized in that** said feeding members comprise three capillary elements (34, 35, 36) of substantially cylindrical shape, disposed in a central position in said container (2), and are inserted in corresponding pipes (38, 39, 40) attached to said housing (14), each 5 pipe communicating respectively with a corresponding feeding compartment (26, 27, 28), said capillary elements (34, 35, 36) being adapted for cooperating with said cartridge (8) for transferring said colour ink (24) from each of said feeding compartments (26, 27, 28) to said compartments (R, G, B) of said cartridge (8) solely and exclusively when said container (2) is in said vertical operating position.

10 5. Device as in one of the claims from 2 to 4, **characterized in that** said outer tank (20) and said intermediate tank (21) comprise a first and a second corresponding portion (44 e 45) extending partly and laterally under a bottom wall (41) of said central tank (22), and **that** the lower ends (43) of two of said capillary elements (34 e 36), associated with said outer (20) and intermediate (21) tanks, are 15 immersed respectively in said first and second portion (44, 45) and the lower end (43) of said capillary element (37), associated with said central tank (22) is immersed in a transverse channel (47), communicating with said central tank (22) and disposed on said bottom wall (4) of the container (2), said channel (47) separating said first lateral portion (44) from said second lateral portion (45).

20 6. Device as in any one of the previous claims, **characterized in that** each of said back-flow compartments (30, 31, 32) presents a volume at least equal to the volume of each of said predetermined quantities of colour ink contained in each of said corresponding feeding compartments (26, 27 and 28).

7. Device as in any one of the previous claims, **characterized in that** said back- 25 flow compartments (30, 31, 32), said feeding compartments (26, 27, 28) and said predetermined quantities of colour ink have their respective volumes proportionate in such a way that said feeding members (34, 35, 36) are uncovered by said colour

inks, when said container (2) is in any position other than said vertical operating position, so that any dripping and/or running of ink through said feeding members is avoided.

8. Device for storing and simultaneously refilling with different colour inks a
5 cartridge (8) of a colour printhead, substantially as described, with reference to the
figures in the accompanying drawings.